

S.N.: 10/622,895
Art Unit: 2611

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Claims 1-20 are canceled without prejudice or disclaimer.

Listing of Claims:

1-20. (Canceled)

21. (Original) A substantially synchronous CDMA communications system, comprising:

a radio base unit capable of bi-directional wireless multirate communications with a plurality of subscriber units, each subscriber unit having a subscriber unit data rate; and

a controller for reordering:

a Hadamard matrix by exchanging columns and rows of the first Hadamard matrix in accordance with at least one first predetermined reordering code to produce a first reordered pseudonoise (PN) code set having improved spectral properties;

at least two second Hadamard matrices by exchanging columns and rows of each of the second Hadamard matrices in accordance with at least one second predetermined reordering code to produce at least two second reordered pseudonoise (PN) code sets;

S.N.: 10/622,895
Art Unit: 2611

a modulator for modulating the first reordered PN code set with each of the second PN code sets to generate at least two usable PN code sets for modulating a data signal of the subscriber units as a function of the subscriber unit data rate.

22. (Original) A system as in claim 21, wherein said modulator further comprises a code set dwell time controller for assigning dwell time to each of the at least two usable code sets for modulating the data signal.